

2023 Senior Horse Bowl Questions

- The questions will not be in this order. The numbers next to each question are only to help identify each question. There will be 30 questions in each round.
- Any questions not used in 2023 will automatically roll into 2024.
- If you have questions or need clarification, email mrrussell@uada.edu with question.
- Recommended sources to find answers:
 - *New Horizons – Dictionary of Equine Terms*. By New Horizons Equine Education Center, Alpine Publications, Inc.
 - *Evans 2nd – The Horse (2nd Edition)* by Evans, Borton, Hintz, Van Vleck,
 - *Kainer – The Coloring Atlas of Horse Anatomy*. Dr. Robert Kainer and Dr. Thomas McCracken, Alpine Publications, Inc.
 - *AYHC 1st – Horse Industry Handbook*, by the American Youth Horse Council, American Youth Horse Council.
 - *AYHC Youth Leaders Manual* – by the American Youth Horse Council.
 - *Lewis 2nd – Feeding and Care of the Horse* (2nd edition), by Lon D. Lewis, 456 pgs.
 - *State line tack catalog*
 - *National 4-H Horse Curriculum Books*:
 - Giddy up and Go
 - Head, Heart, and Hooves
 - Stable Relationships
 - Riding the Range
 - Jumping to new Heights

1. What do we call it when the lateral cartilage immediately above and toward the rear quarter of the hoof head is ossified?
2. Name the five regions of the spinal column.
3. Name 4 things that induce a higher rate of hoof growth.
4. What is it that a Hackamore lacks compared to other bridles?
5. What is a bowed tendon, and where is it most found?
6. Name a feedstuff that provides a highly digestible source of fiber and is often found in the diets of older horses?
7. The ovary is responsible for the production of which two female hormones?
8. What conformation defect places greater strain on the medial small metacarpal bone, often leading to splints?
9. _____ is a term used to indicate that the horse appears to have enough height and/or thickness of bone for his size. It generally reflects personal opinion.
10. What type of martingale allows the rider to always maintain contact with the bit?
11. 2-part question. What are lymphocytes and what is their function?
12. Excessive intake of what vitamin causes calcification of lungs, heart, kidneys, and other organs?
13. 2-part question. Grass-hays can be divided into two different types. What are the types and give two examples of each?
14. What is the most feasible, non-chemical means of breaking the fly life cycle?
15. What is the foot fall sequence for the running walk, starting with the left front foot?
16. What substance is produced by sorghum-sudan grasses that make it an unfavorable forage to feed to pregnant mares?

17. What is the average hoof growth rate for all horses (per month)?
18. There are distinct characteristics that differentiate the Overo from the Tobiano color pattern. List four distinguishing characteristics of an Overo.
19. Gene pairs that are not identical are called what?
20. What disease is characterized by swollen or abscessed lymph glands, particularly those under or behind the jaws?
21. The sidebone is the complete ossification of the cartilages of which bone?
22. What determines the amount of energy required by a muscle?
23. What is the function of the pancreas?
24. Where is the white line located on the horse's foot?
25. White muscle disease in young foals is caused by a deficiency of what trace nutrient?
26. What is the term for the colorless liquid surrounding the fetus?
27. What gland secretes insulin?
28. What four parts make up the cardiovascular system?
29. 2-part question. What is another name for the placenta and what is its purpose?
30. Name the three permanent incisors and the age that they appear.
31. What system produces chemical substances called hormones?
32. Commonly seen in hard-worked horses, what is the term for the condition that results from an excessive amount of synovial fluid in the fetlock joint capsule?
33. Give four areas of the horse that may be observed for body fat.
34. How many bones form the basis of locomotion in the horse?
35. What are the two most important aspects of ideal conformation of the forelimbs?
36. List four ways grain can be processed for horse feed.

37. What is the disorder that is associated with dysfunctions of the larynx causing roaring?
38. What is the expected ratio of roan to solid-colored foals, if a roan stallion is bred to a roan mare?
39. What is the name for the tendon which acts to straighten a joint?
40. What is a bony growth at the point where the cannon and hock attach?
41. Name 4 protein supplements that are commonly fed to horses.
42. Which species of pasture grass contains a fungal endophyte that can cause problems in horses, especially pregnant mares?
43. What is the name of the anti-coagulant in moldy sweet clover hay that interferes with blood clotting?
44. What animal is known for a dorsal stripe running from mane to tail that is intersected by the arms of cross at the withers?
45. What part of the horse lies under the mane? Be more specific than just the neck.
46. What cattle feed additive is highly toxic to horses?
47. Name three types of negative reinforcements in training horses.
48. In what part of the horse's digestive tract are soluble carbohydrates digested to simple sugars?
49. What is the term of the inflammation and thickening of the long plantar ligament? It may be caused by faulty conformation or by repeated blows.
50. What is the term for the time between the occurrences of infection and the onset of clinical signs?
51. Name 3 different hay/forage types.
52. During its first week of life, how often does a foal normally nurse per hour?

53. What are the threadlike structures that appear in pairs or twins in body cells?
54. What is the term for the coal-tar based ointment that has a soothing drawing effect?
55. Name the superficial muscle found in the withers of the horse?
56. An Antibiotic is used to control or eliminate what?
57. Name three paths of physiological water loss from a horse's body.
58. What horse was the foundation sire of the Tennessee Walking Horse breed?
59. What is an umbilical hernia?
60. Exercise involves the conversion of chemical energy to what type of energy?
61. What is the production of milk called?
62. The horse's skin is composed of two layers. What are they?
63. What is the common name for Equine Spinal Ataxia?
64. What is another name for chronic obstructive pulmonary disease?
65. What term is used to describe the failure of the immune system to form?
66. What is the name for the oral vice in which a horse sticks its tongue out the side of the mouth for periods of time?
67. What is the general term for the accumulation of excess fluid in the tissues under the skin causing a diffuse swelling of the area?
68. What is the name of the condition of the hoof when there is a separation of the sensitive and insensitive laminae at the white line at the toe?
69. In reference to a wound, what is a granulation?
70. What are founder rings?
71. What is the normal gestation of a mare?
72. What is the average length of the estrous cycle in the mare?

73. The gaskin muscle is located between which two joints on the hind leg?
74. Name the two hormones released by the pituitary gland to regulate the estrous cycle.
75. Inflammation on the fluid-filled bursal sac that is located between the thoracic vertebrae and the nuchal ligament of the neck is called what?
76. What word means rules of practice in respect to a single class of human actions or moral compass?
77. What is the name of the anatomical devise possessed by the horse that reflects wasted light back onto receptors in the eye?
78. In a horse how many pairs of ribs are true and how many are floating?
79. Name four functions of the American Horse Show Association.
80. What is Banamine and what is it used for? Try to be specific.
81. The “1st digital phalanx” is just below what bone.
82. What is the name of the anti-coagulant in moldy clover hay that can cause blood not to clot?
83. What is the function of insulin?
84. English saddle sizes range from 16-19 for adults. Where is an English saddle measured to determine size?
85. What is a cloudy, opaque appearance of the eye called?
86. What are the two most common calculations used to evaluate the energy content of horse feeds?
87. What is the term used to indicate that a horse may have a structural problem or deviation which may have only limited effect on the horse’s ability to perform?
88. What are the functional units of the lung where gas exchange occurs?

89. What is the name for the part of the horseshoe nail that prevents the nail from pulling through the shoe?
90. What substance produced by the horse contains nitrogen, sulfur metabolism, inorganic salts, and pigments?
91. What is the difference between true and false ribs?
92. Temperature and humidity play an important part in a horse's ability to cool itself. Under what conditions is the horse's cooling ability significantly reduced to the point where it can be fatal if the horse is stressed?
93. What fatal viral disease is relatively rare in horses but should be prevented with an annual vaccine because it is zoonotic?
94. What are the birdcatcher spots?
95. What do we call the product resulting from hay that is baled with high moisture content and wrapped in plastic to create an anaerobic environment?
96. What is the foundation of any horse ration?
97. *Streptococcus equi* was first described in 1988 as the bacteria causing what disease?
98. Which has more digestible energy per pound - timothy hay or oats?
99. Approximately what percent of total body calcium is contained in the skeleton and teeth?
100. What gland secretes insulin?
101. Name the mineral needed for blood coagulation?
102. What is the term for the measurement of the concentration of an antibody in blood serum?

103. What body condition score would you assign a horse with an obvious crease down his back, patchy fat appearing over ribs, and bulging fat around tailhead?
104. Grains are processed in many ways. What benefit does steam rolling oats have over dry rolling?
105. The average size adult horse will ordinarily produce how many pounds of manure in one day?
106. What is the scientific study of how characteristics are passed from parent to offspring?
107. Name three functions of the alimentary canal.
108. What is meant by parturition?
109. In inches, how fast does the hoof wall grow per month?
110. What is the swelling of the tarsocrural joint capsule called?
111. What is the difference between a Pelham and a Weymouth bridle?
112. What important protein does colostrum contain?
113. What amount (percentage) of dry forage should a horse consume daily?
114. Which part of the brain controls reproduction?
115. The brain, brain stems, and spinal cord make up what system in the horse?
116. Name three systems for the horse's body that use smooth muscles?
117. Name 5 conformational defects whose common name refers to another species of animal.
118. What breed of the horse is noted for having Hyperkalemic Periodic Paralysis?
119. Name 2 methods of restraining a horse.
120. Besides baled hay, what is another form in which cut forages can be fed?

121. When referring to the process of a disease, what does acute mean?
122. List three signs a horse may have gastric ulcers.
123. What is the term for a procedure using local anesthesia that is used to diagnose a site of pain?
124. Where is the bacterium *Clostridium Tetani* commonly found, and how is it transmitted to the horse?
125. Define the term seasonally polyestrus.
126. What internal parts of the horse make up the central nervous system?
127. Equine sweat is hypertonic, what is this?
128. What substance can be applied topically to control hemorrhage?
129. What is the product of a stallion and a jenny called?
130. What is the effect of placing a blanket on a horse with a winter coat?
131. Fullering, web, and branch are parts of what horse equipment?
132. Simultaneously, blood enters the right atrium from the body and the left atrium from where?
133. What is the genetic term used to describe paired genes that are not identical?
134. What is blood spavin?
135. Name the Genus of the living members of the horse family.
136. Where is the small intestine located in the horse?
137. What is the primary sign of iron deficiency?
138. What bacterium is usually present in the affected tissues of the hoof?
139. Name four basic styles of English girths.
140. A mare that is nursing a foal is known by what term?

141. What is the coronary cushion?
142. What are the functions of the larynx?
143. Synovial joints are classified based on the type of motion. Name four of these joints.
144. What is the most likely outcome when the non-glandular portion of the stomach is exposed to low pH from excess acid production or intense exercise?
145. In addition to the ratios of the neck lines, a change in the slope of a horse's shoulder also affects what other major body ratio?
146. A base-narrow horse is predisposed to landing on what part of the foot?
147. What part of the horse's foot provides traction and absorbs shock?
148. What metabolic disease of equines is characterized by an inability to shed their hair coat during long days?
149. What is passive transfer of immunity?
150. Give four symptoms of shock (as in health of the horse, not electrical shock).
151. Name the four classifications of bones in the horse.
152. A horse has a white band of hair just above the hoof. In this white band there are black spots. What is the name for these spots?
153. What is a sarcoid?
154. What does DOD stand for in growing horses?
155. What is the best way to control hemorrhage?
156. Name two conditions that base narrow horses tend to develop due to their way-of-going.
157. What is the syringe-like device used for giving large pills to a horse called?

158. What is the name for the flexible quirt that is attached to “California-style” reins?
159. What is a non-infectious disorder of the central nervous system in newborn foals?
160. What is a sweet itch?
161. What is caused by *Streptococcus equi* infection?
162. What are the units of inheritance called?
163. What is the name for the unsoundness where the bursa at the top of the horse’s head becomes infected?
164. Name the founding sire of the Morgan breed.
165. What is currently the only surviving species of wild horse native to Eastern Asia?
166. What is the name for the area in the horse’s mouth where the bit rests?
167. What term can be defined as the total amount of air expired or inspired within a minute?
168. Give two reasons for putting a hot poultice on a horse?
169. What hormone, produced in the anterior pituitary, plays a role in follicular development during transition and milk production in the foaling mare?
170. What portion of the horse GI tract allows them to digest grasses via hindgut fermentation?
171. What is an abscess?
172. Why should you not use black walnut shavings in your horse’s stall?

173. What is the most accurate method to assess the nutrient make-up or value of hay?
174. Where are the intercostal muscles located?
175. What is the meaning of lordosis?
176. Name the parts of the digestive tract in order starting from the stomach.
177. What hormone is responsible for milk let-down and contractions during parturition?
178. Why is “balance” the single most important characteristic in equine selections?
179. Name 4 ways in which grains differ nutritionally.
180. What two parts of the horse does the deep digital flexor tendon connect?
181. What does the term “passive transfer of immunity” mean?
182. What are the four stages of a fly’s life cycle?
183. List 5 signs of colic.
184. Name the artery that carries oxygen poor blood from the heart to the lungs?
185. How is plant maturity of a hay sample visually determined?
186. What is necrosis?
187. Name the equine disease that is characterized by a respiratory illness, peripheral edema, and abortion?
188. What muscle is responsible for the skin moving and the shaking of flies off the horse?
189. What is pulmonary hemorrhage?
190. Why is the hoof wall harder at the toe than at the quarters?
191. What is the term for a bacterial infection of the udder?

192. Give another name for the oviducts.
193. Name the three major parts of the cardiovascular system of the horse.
194. What does the term “respiratory frequency” refer to?
195. A horse that shows increased musculature along the costal arch most likely has what condition?
196. What is the spasmodic muscle contraction that produces heat to help maintain body temperature?
197. What is a displaced patella of the stifle joint called?
198. Explain the difference between Tetanus Toxoid shot and Tetanus Antitoxin.
199. What separates the frog from the bar and sole of the foot?
200. Name the specie of parasite that have vestigial (non-working) mouth parts as adults and feed only in their larval stage, on blood and tissues of the horse’s stomach and duodenum.
201. Why should you use a tighter curb chain on a half-breed or spade bit?
202. What is the general term for a drug that causes the air passages of the lungs to widen?
203. How many pairs of chromosomes are responsible for the sex of a foal?
204. Horses have how many pairs of chromosomes?
205. 2-part question. Golden American Saddlebreds have two predominant families. Name the two families and the special trait each family is known for.
206. Name three causes of foal diarrhea.
207. When a horse is galloping on the right lead, the suspension phase begins after which foot leaves the ground?

208. Name 5 ways forage can be processed for a horse to eat.
209. What are erythrocytes?
210. What notable person said, “The outside of the horse is good for the inside of man?”
211. How, what year, and why was the Cooperative Extension Service established?
212. Name the infection that localizes in the lungs and is characterized by the walls of the Alveoli being irritated and filled with fluid.
213. What endocrine gland regulates the basic metabolism?
214. What is the term for ossification of the lateral cartilages of the coffin bone that prevents normal expansion of the foot?
215. What conformation defect is predisposed to carpal chip fractures, especially in young racehorses?
216. How soon does the mare produce colostrum after the birth of the foal?
217. What piece on an English bridle is not usually seen on a Western bridle?
218. Which portion of the small intestine dumps into the cecum?
219. Name two structures of the horse’s forelimb that are directly affected by navicular disease.
220. What is the “first milk” a colt receives called?
221. _____ is a condition of acid accumulation in the body due to disruption of the normal acid-base balance; may be caused by overworking an unfit horse.
222. How would you examine the incisor teeth of a horse?

223. In the newborn foal, what site allows easy access for bacterial invasions into the body?
224. What are tactile hairs?
225. The influenza virus can travel distances of at least how many yards?
226. Why are the sensitive structures of a horse's hoof called sensitive?
227. What is the responsibility of the urinary system?
228. The lowering of oxygen saturation of the arterial blood is called what?
229. Name the three bones found in the horse's hoof.
230. Name one function that sodium, potassium, and chloride are essential for.
231. Give three functions of the horse's kidneys.
232. What is an "obligate parasite"?
233. Which vice is characterized by biting or setting the teeth against the fence or some other object while sucking air?
234. Describe a founder ring.
235. What is another name for moon blindness?
236. What are the long, slender thread-like structures that are paired and contain genetic material?
237. During what stage of the mare's estrous cycle is the mare receptive to the stallion?
238. What is the term for the ribs which lack costal cartilage attachment to adjacent cartilages?
239. Name three coat colors that are lethal in the homozygous state.
240. Which organ in the digestive system is responsible for the horse's gut sounds.

- 241. Give four advantages of a grass-legume pasture.
- 242. What does net energy refer to?
- 243. Define the “stride stance phase” of a horse’s gait.
- 244. What is the general term for the bacteria and other microorganisms that normally reside in the large intestine?
- 245. What is a spasm?
- 246. What nerve is responsible for the sense of smell?
- 247. What is the most effective treatment for Recurrent Airway Obstruction?